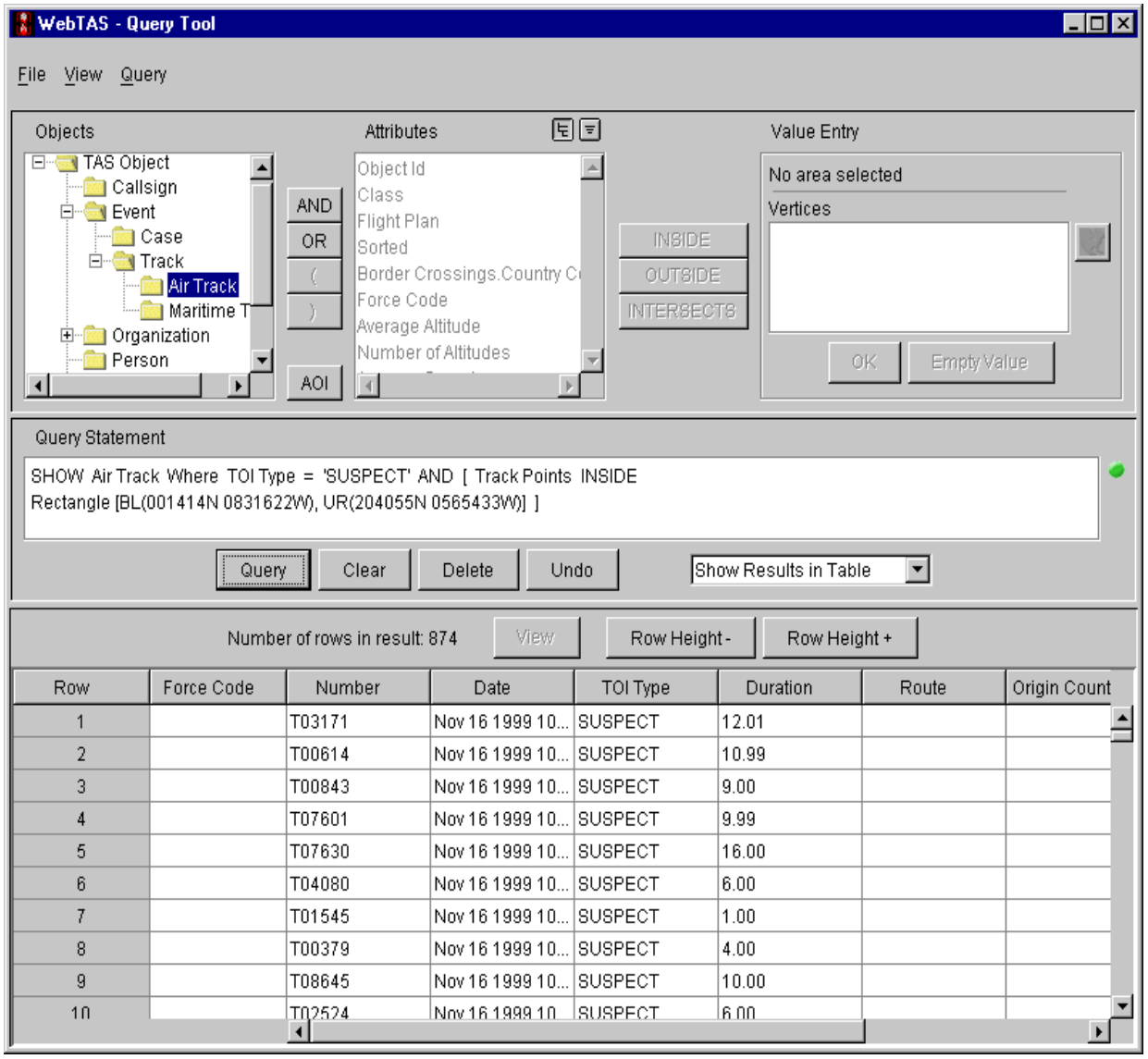
Web Enabled
Timeline Analysis System
WEBTAS

Program Manager: John Mucks
AF Research Lab, Rome, NY
DSN: 587-7950
Com: (315) 330-7950
mucksj@rl.af.mil

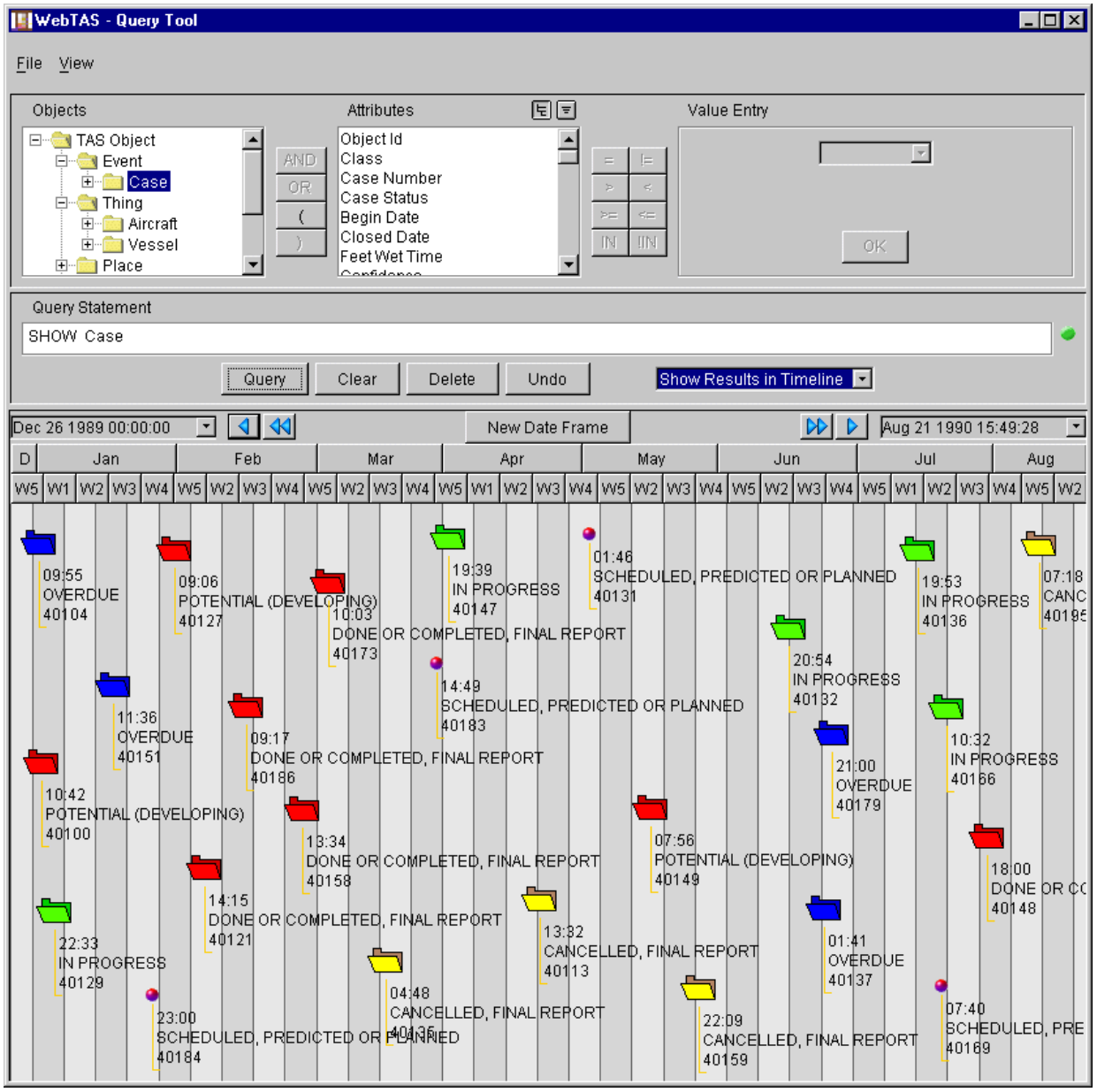
- WebTAS is a set of generic analytical tools that are domain tailorable on site
- Tools include: Timeline, Map, Query, Graph, Histogrid, Situation Modeling, Situation Assessment
- Recently re-engineered to JAVA, WEB environment
- Tailored to support various domains to include: Foreign C3I, Counter Drug, Counter Insurgency, LEA, Space Surveillance, Deception and Denial, Information Warfare
- Software is Government owned, distributed on CD,

WebTAS Query Tool



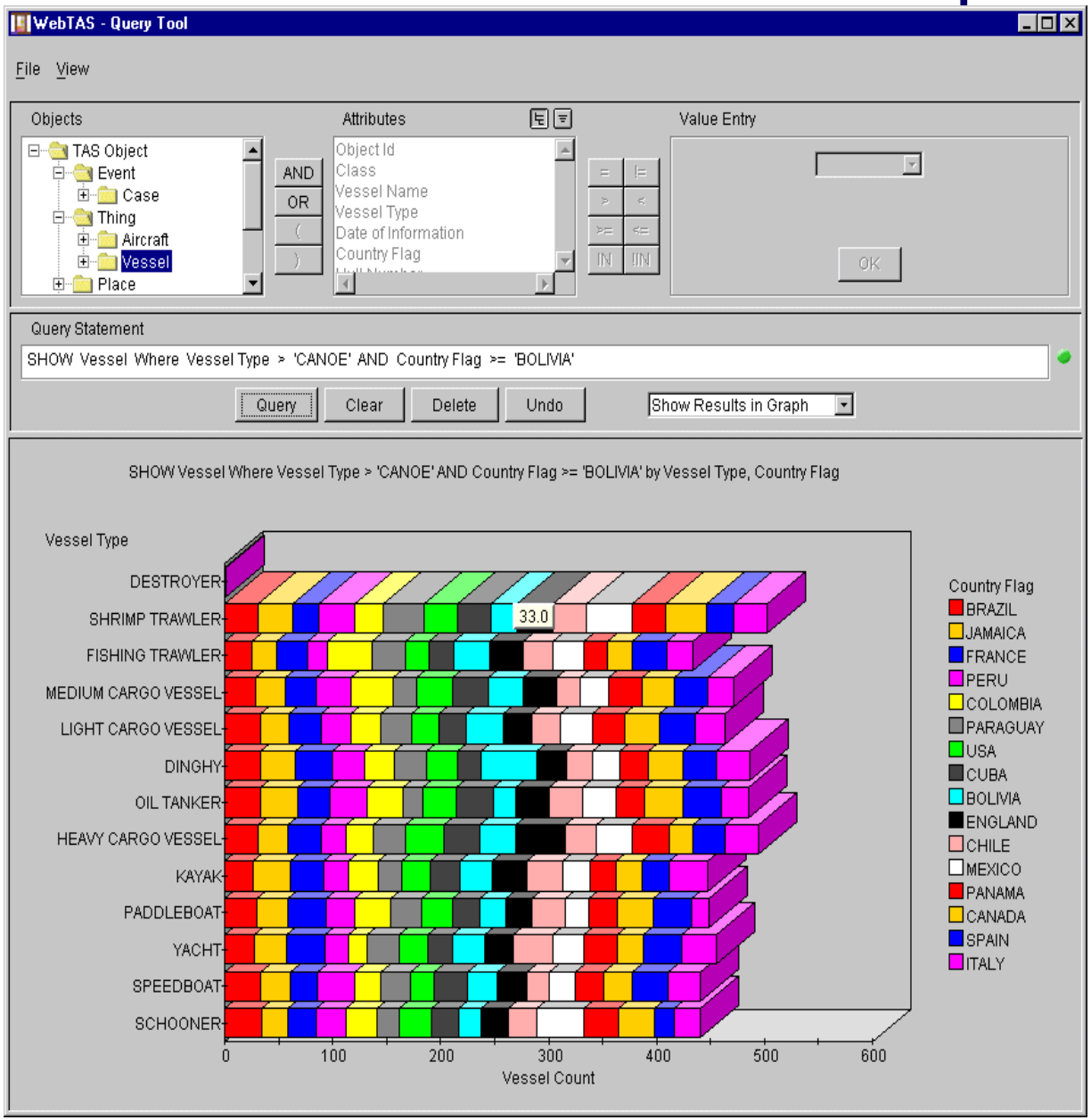
- The Query Tool allows users to build ad-hoc queries with a simple point and click interface *“Show me the SUSPECT Air Tracks with average speed > 230 knots“*
- Queries may also include Area of Interest attributes *“Show me Airfields within 150km of this point”*
- Results may be displayed in tables, timelines, maps, graphs, histogrids and web browsers

WebTAS Timeline Tool



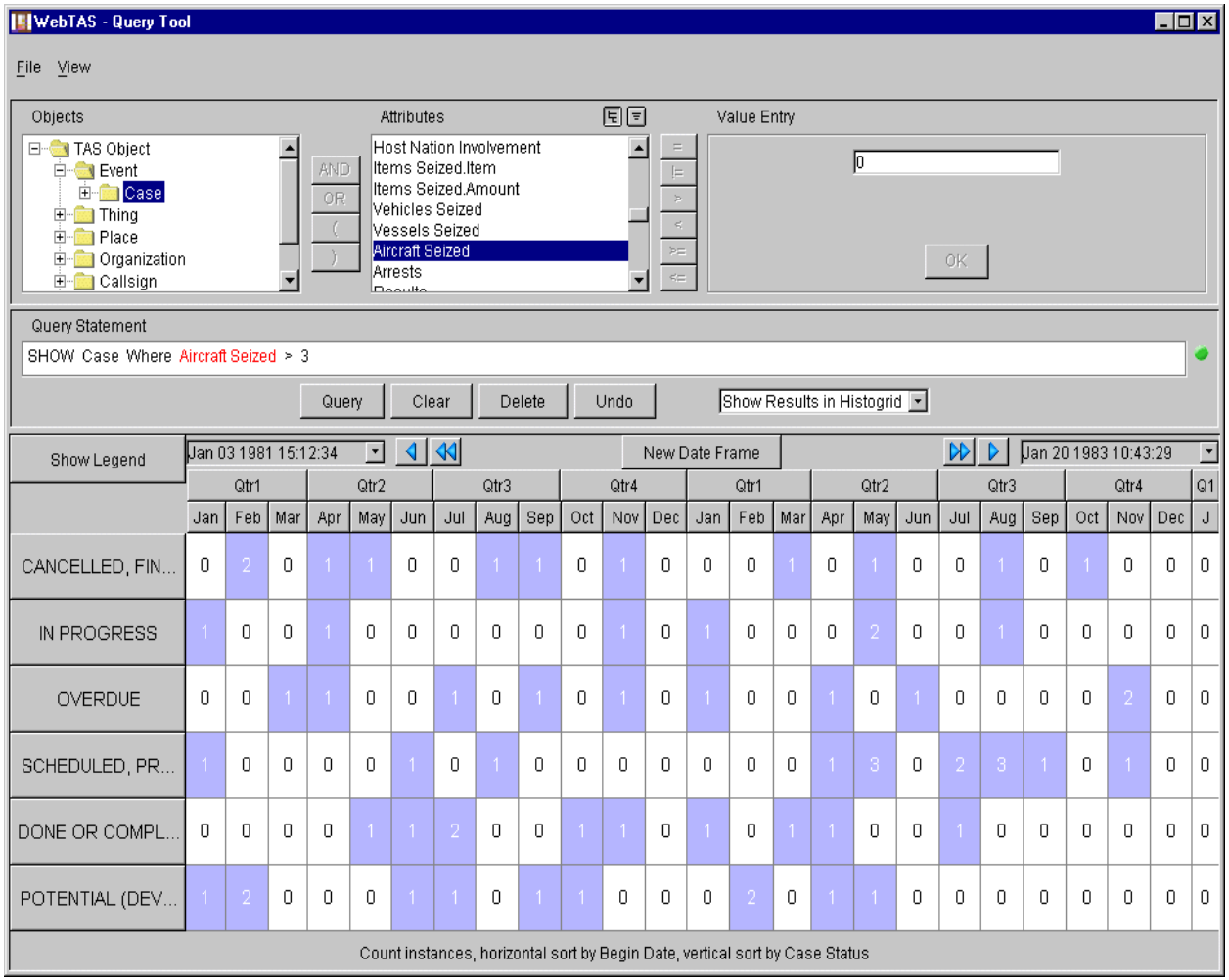
- WebTAS specializes in event-oriented pattern detection
- Timelines display any data with temporal attributes
- Critical view for pattern analysis where inter-event timing is an important factor
- Timeline views may represent several minutes or many years depending on the nature of the question

WebTAS Graph Tool



- The Graph Tool provides 2D and 3D views of query data results.
- Typically counts are the accumulation method, but WebTAS can accumulate any numeric attribute (e.g., Total amount of cocaine seized by month and by seizing organization)
- WebTAS specializes in time-oriented histogram graphs
- This graph shows

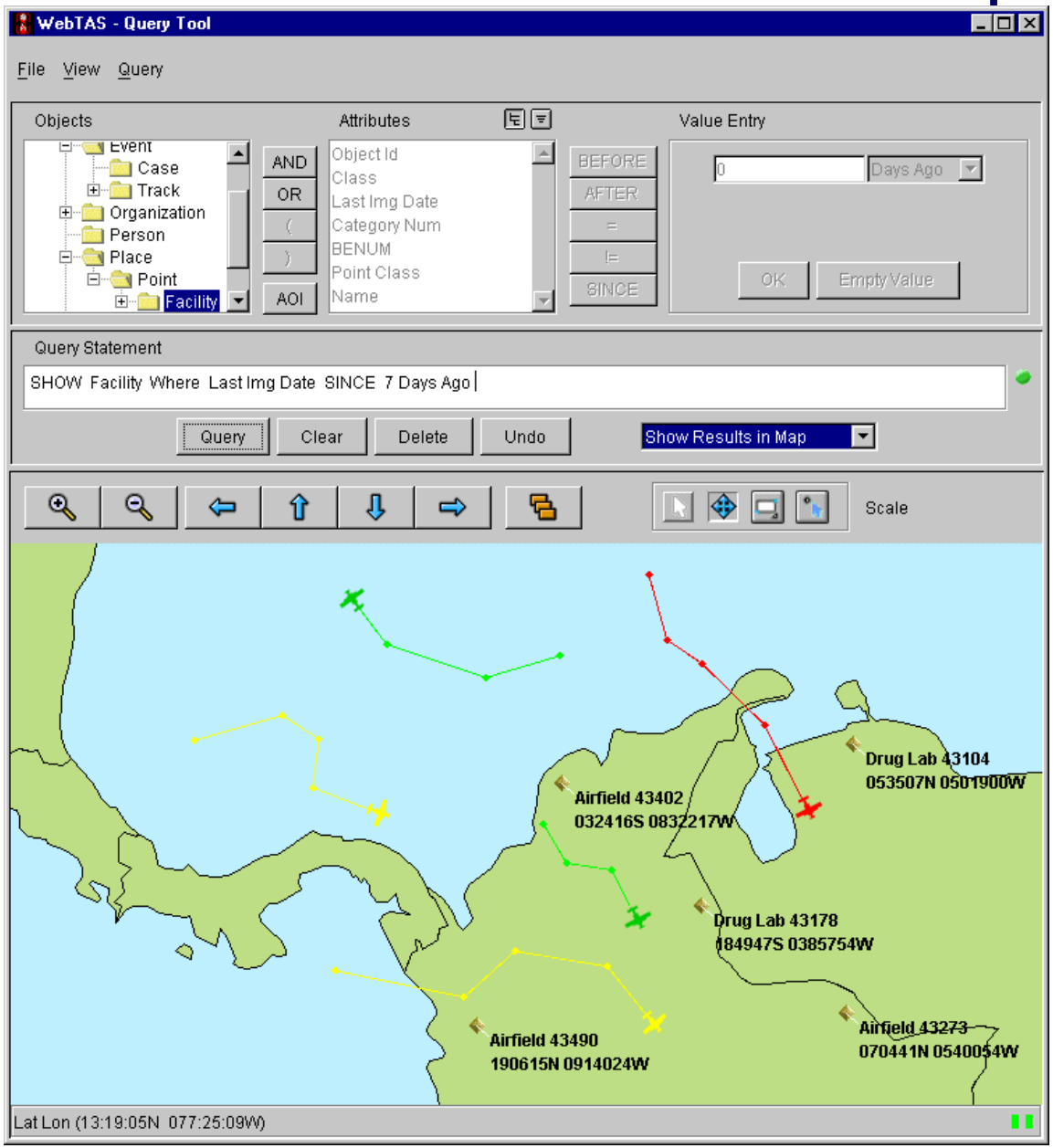
WebTAS Histogrid Tool



- The Histogrid display allows visualization of time-oriented clusters
- The darker the boxes the more concentrated the number of activities
- Like the graph, counts and numeric attributes may be accumulated

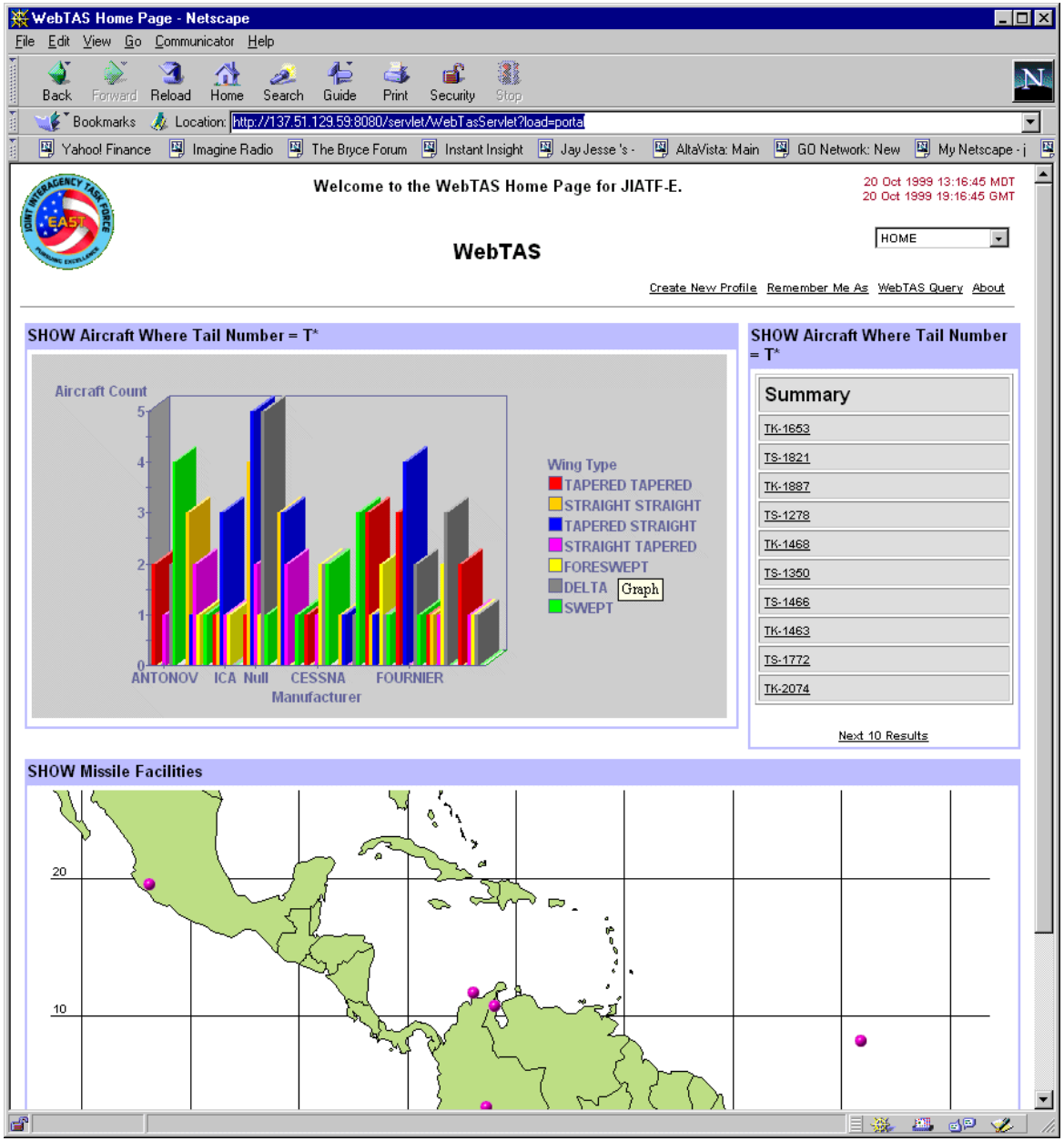
Example illustrates all case files between January 1981 and January 1983 where more than 3 aircraft were seized. The view summarizes the number of cases per month/quarter which match this criteria horizontally by date, and vertically by the case status.

WebTAS Map Tool



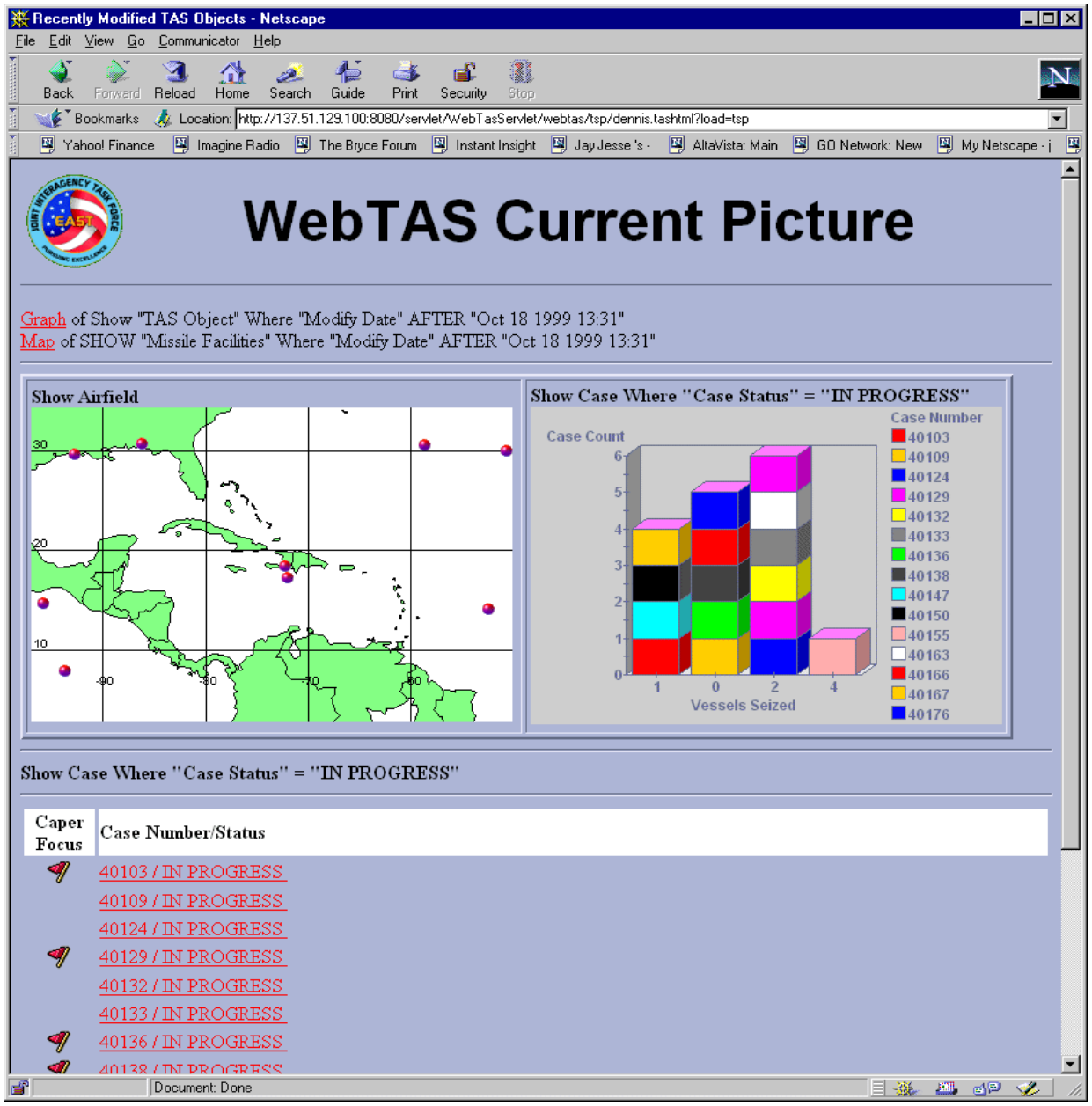
- Map Tool provides a geographic view for the query results
- Any item that contains spatial information may be displayed on a map
- Multiple queries may be overlaid and hidden
- Supports many standard map data types: ArcView Shapefiles, DTED (Terrain), CADRG, Digital Chart of the World and many others
- Provides several spatial tools: Time and

WebTAS Browser Portal



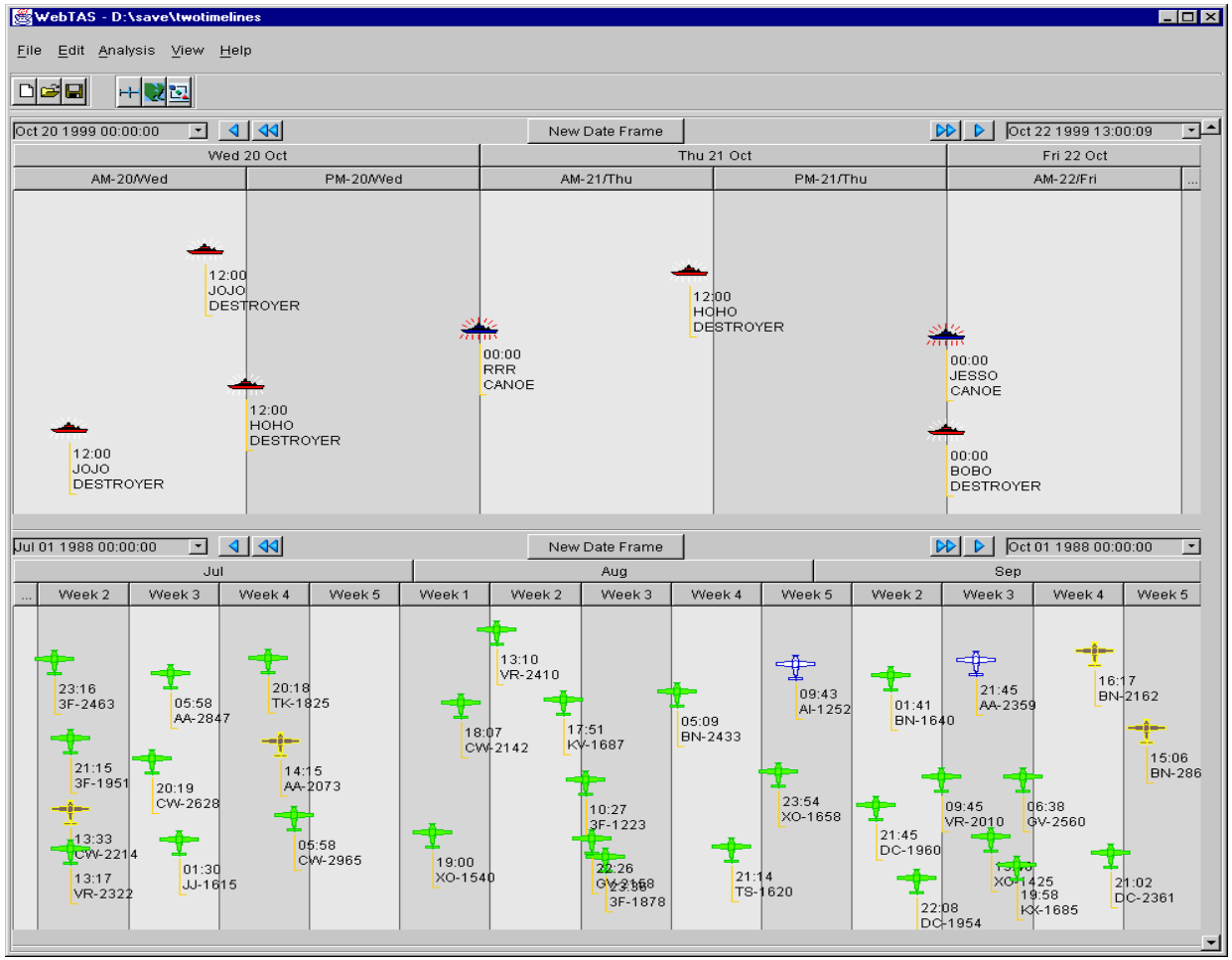
- The portal is a user-customizable, browser-based view of WebTAS data
- Similar to portals on the world-wide-web, users can tailor the queries and types of displays
- For example: An analyst working on Caper Focus can set up queries displaying activity by suspect vessels over the last 12 hours on a map. The analyst can then view the portal page first thing in the

WebTAS Server Pages



- WebTAS Server Pages allow web-capable organizations to build and integrate WebTAS components and queries into existing or new pages
- For example: An organization that creates a daily activity overview via a web page can insert a map component that contains the latest suspect track views
- Components are

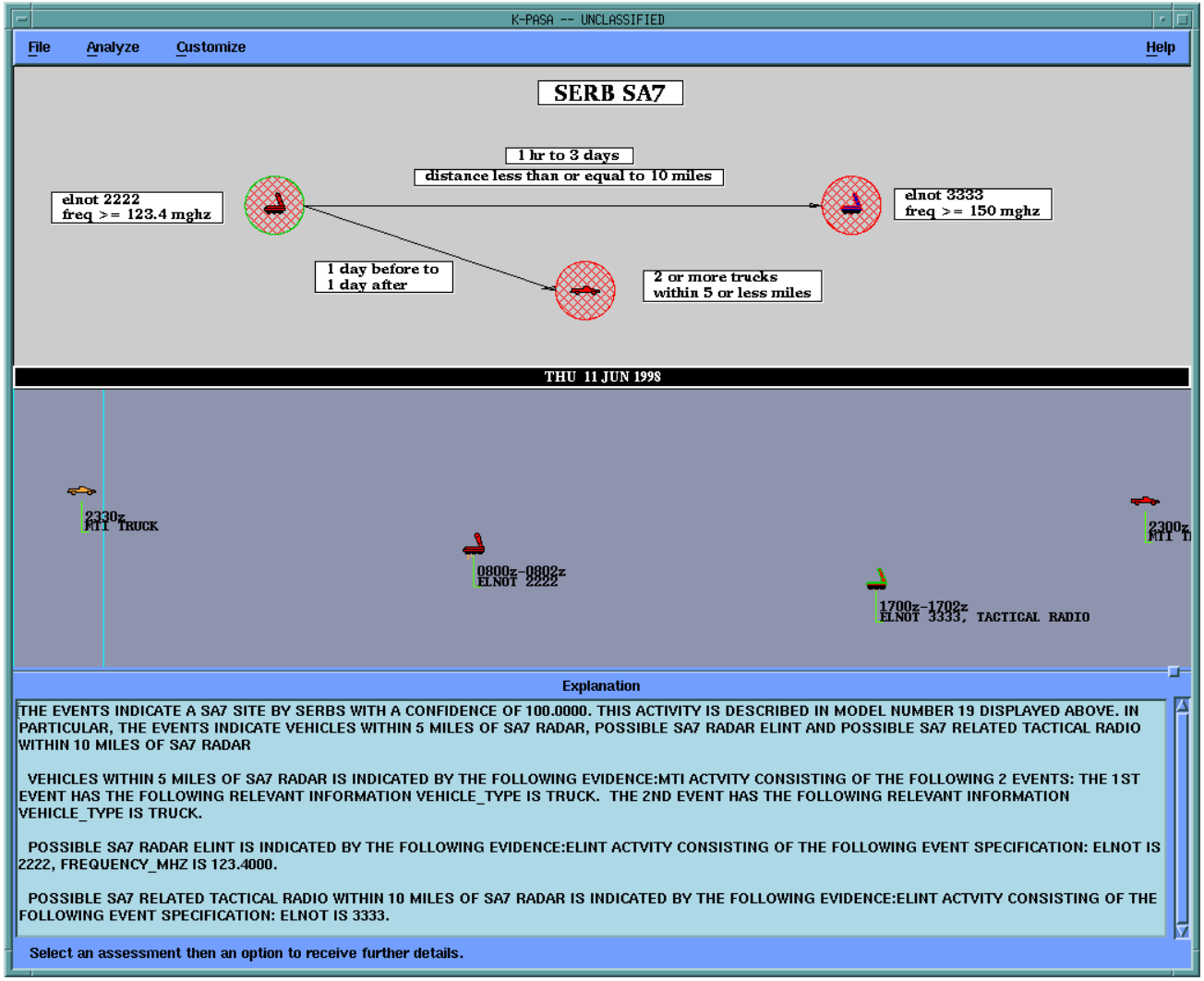
WebTAS Project Tool



- The Project Tool supports a work environment for a specific analysis task
- Supports historical pattern analysis and model development
- Allows users to setup and save views and settings and save them into re-callable projects.

Example: A Colombian air analyst may create a project which looks at air activity. The current air track activity is displayed using a timeline and map. A third band could depict a timeline with a classic drug drop from a year ago to allow a comparison between current activity and historical precedents

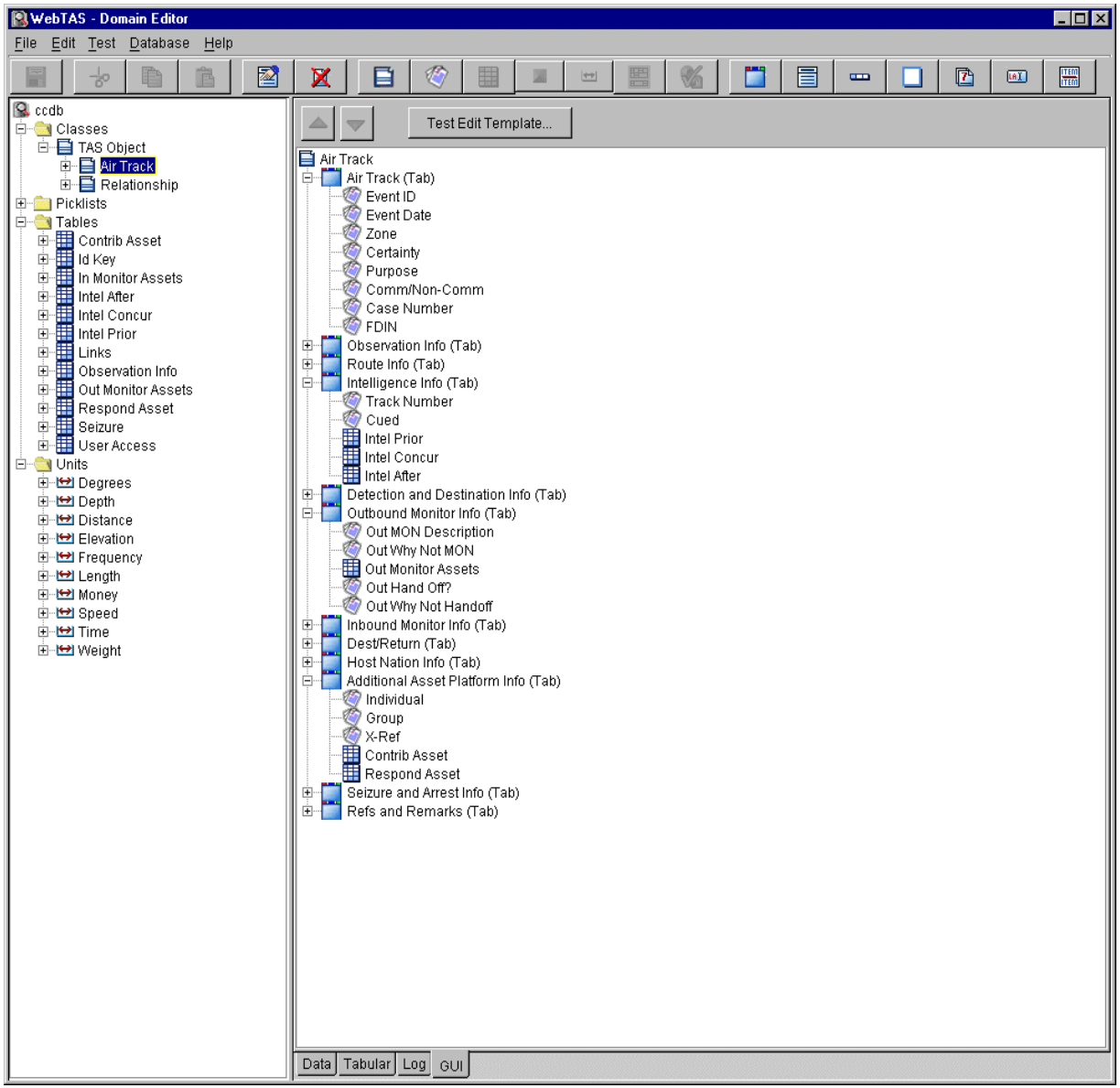
WebTAS K-PASA Expert System



- Knowledge-based Predictive Analysis and Situation Assessment (K-PASA) provides time-oriented pattern analysis functions
- Analysts build models of activities that may be verified against large historical data sets
- Real-time detection alerts analysts of potential ongoing situations

- This display shows an explanation screen describing the evidence associated with a particular assessment

WebTAS Domain Builder



- The Domain Builder is a site administrator tool providing the ability to add or modify classes or attributes in the data schema.
- For example: A site may add a new attribute to the track object, or add an entirely new object called Seizure
- No code changes are necessary. All data schema changes automatically configure the WebTAS tools